

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A system for processing a simplified pre-formed plastic container filled with a hot product, comprising:

hot filling means for filling a rigid container body of the pre-formed plastic container with the hot product in a production line, the rigid container body having a surface surrounding an interior of the rigid container body and having a projection extending from the rigid container body;

means for capping a neck of the filled rigid container body with a cap in the next operation of the production line;

means for transporting through the production line the pre-formed plastic container having the projection extending from the rigid container body;

means for supporting, during the transporting, the rigid container body having the projection extending from the rigid container body;

means for cooling the rigid container body of the pre-formed plastic container filled with the hot product; and

means for pushing the projection extending from the cooled rigid container body into the interior of the rigid container body so that the resultant, filled and cooled rigid container body is relatively free of structural geometry over a substantial portion of the surface.

2. (currently amended) The system for processing a simplified pre-formed plastic container according to claim 1, wherein, when the rigid container body is cooled by said means for cooling, the cooling produces a vacuum within the rigid container body, and substantially all of the vacuum is taken up by the pushing.

3. (currently amended) The system for processing a simplified pre-formed plastic container according to claim 1, further comprising means for blow-molding a parison to form the rigid container body, where the surface of the rigid container body has the neck, a shoulder area, a base, and a smooth side surface surrounding the interior of the rigid container body, and the projection extends from the base of the rigid container body before the filling begins.

4. (currently amended) The system for processing a simplified pre-formed plastic container according to claim 3, further comprising:

means for inverting the projection extending from the rigid container body into the interior of the rigid container body in the next operation of the production line after the parison is blow-molded; and

means for repositioning the projection of the rigid container body with a force prior to the filling by said filling means for filling so that the projection moves outside of the rigid container body and extends from the rigid container body.

5. (currently amended) The system for processing a simplified pre-formed plastic container according to claim 1, wherein the rigid container body with the projection

extending from the rigid container body is conveyed by its neck during the filling and capping.

Claims 6-8. (cancelled)

9. (currently amended) The system for processing a simplified pre-formed plastic container according to claim 1, wherein the means for pushing the projection extending from the cooled rigid container body into the interior of the rigid container body is configured to position an actuator panel with projections extending therefrom underneath a container holding device where the projections of the actuator panel correspond with container body projections through a respective opening of the container holding device; further comprising means for moving the actuator panel so that the actuator panel projections push against the container body projections thereby forcing the container body projections inside respective rigid container bodies.

10. (currently amended) The system for processing a simplified pre-formed plastic container according to claim 1, wherein the rigid container body has a grip portion in addition to the substantial portion of the surface that is relatively free of structural geometry.

Claim 11. (cancelled)

12. (currently amended) The system for processing a simplified pre-formed plastic container according to claim 2, further comprising at least a mini vacuum panel, wherein

the pushing of the projection takes up the majority of the resultant vacuum and the mini vacuum panel takes up the remainder.

13. (withdrawn) A method for processing a plurality of plastic containers, each said plastic container having a neck portion and a vacuum panel incorporated into the container bottom, the method comprising:

filling, while supporting from respective neck portions, container bodies of said plurality of plastic containers with a product in a production line, each said container body having a projection extending from the container bottom;

sealing, while supporting from respective neck portions, the filled container bodies in the next operation of the production line;

cooling the container bodies filled with the product, thereby creating a vacuum in each said plastic container; and

pushing the projections extending from respective bottoms of the cooled container bodies into the interior of corresponding container bodies with a first actuator to reduce respective vacuums created therein.

14. (withdrawn) The method for processing a plurality of plastic containers according to claim 13, wherein the first actuator includes an extendable rod, said extendable rod being extended to apply a compressive force to each said projection projecting from the container bottom, thereby moving each said projection to a retracted position to reduce the volume of the container and minimize the distortion of side walls of said container.

15. (withdrawn) The method for processing a plurality of plastic containers according to claim 13, further comprising:

feeding a plurality of container holders; and

inserting containers with extended projections into respective container holders with a second actuator including an extendable rod, so that each said container holder holds the corresponding container body during the cooling process.

16. (withdrawn) The method for processing a plurality of plastic containers according to claim 15, further comprising combining the respective containers and container holders at a combining station including a container holding wheel rotating in one direction with a container feed-in assembly and a container holder feed-in assembly, where the containers are held by the rotating container holding wheel and then are inserted into fed-in container holders.

Claims 17-18. (cancelled)

19. (withdrawn) The method for processing a plurality of plastic containers according to claim 15, wherein the pushing of the projection extending from the cooled container body into the interior of the container body includes positioning a gripper to hold a container and then actuating the first actuator such that an extendable rod is extended through a respective opening of the container holder with an upward force that is counteracted by the downward force of the gripper, thereby forcing the container projection inside the corresponding container.

Claim 20. (cancelled)

21. (withdrawn) The method for processing a plurality of plastic containers according to claim 16, further comprising a circular path in which the containers and container holders move, wherein the first actuator is arranged to move in a circular path corresponding to the path of the combined container and container holder, where the first actuator applies a compressive force to push the extendable projection into the interior of the container body.

Claim 22. (cancelled)

23. (withdrawn) A container handling system for handling a container in a processing system where the container has a vacuum panel at a bottom surface thereof and a geometrically unstable configuration when the vacuum panel is extended to project from the container bottom, said container handling system comprising:

a conveyor configured to move said containers with a vacuum panel surface on a bottom surface thereof to and from a filling section of the container processing system to facilitate filling the containers at the filling section of the container processing system; and

a first actuator configured to move the vacuum panel of each of the containers to a retracted position inside each respective container after the container is filled at the filling station of the container processing system so that the container is returned to a geometrically stable configuration from the geometrically unstable configuration after the filling.

24. (withdrawn) The container handling system according to claim 23, further comprising:

a container holder having a central opening for receiving a container with a bottom vacuum panel having an extendable projection and a bottom with a hole corresponding to the extendable projection; and

a second actuator for moving the vacuum panel of the container to an extended position, projecting from the bottom container surface, to increase the volume in the container, prior to the filling, where the container is supported by the container holder.

25. (withdrawn) The container handling system according to claim 24, where said second actuator includes an extendable rod, said extendable rod being extendable for moving the vacuum panel of the container to the extended position.

26. (withdrawn) The container handling system according to claim 25, further comprising a container, said container having a vacuum panel on a bottom side thereof, said extendable rod extending into said container for moving said vacuum panel to an extended position to increase the volume of said container so that said container can be hot-filled and subjected to a post-cooling process without significantly distorting side walls of the container.

27. (withdrawn) The container handling system according to claim 26, further comprising a container having a vacuum panel on a bottom side thereof, wherein said first actuator includes an extendable rod, said extendable rod being extended to apply a

compressive force to said vacuum panel from an underside of said container to move said vacuum panel to the retracted position thereby reducing the volume of said container to minimize the distortion of said side walls of said container due to a resultant vacuum created during a cooling process.

Claims 28-29. (cancelled)

30. (withdrawn) A method for processing a plurality of plastic containers with a vacuum panel incorporated into each said container bottom, the method comprising:
filling a plurality of container bodies with a product in a production line, each said container body having a projection extending from the container bottom below a standing ring to form an extended container;

sealing each said filled extended container body in the next operation of the production line;

carrying each said sealed and filled extended container down the production line while supporting the sealed and filled container by the standing ring; and
after the carrying, pushing each said projection above the standing ring into the filled and sealed container body with an actuator.

31. (withdrawn) The method of claim 30, wherein a vacuum is created in each said plastic container by cooling the product.

32. (withdrawn) The method of claim 30, wherein each said container body has smooth sidewalls.

33. (withdrawn) The method of claim 30, wherein the pushing is done with an actuator panel having a plurality of projections, each projection simultaneously pushing a projection from a different container of said plurality.

34. (withdrawn) The method of claim 30, wherein said carrying includes passing each of said plurality of plastic containers through a cooling apparatus.

35. (withdrawn) A method of making and filling a container comprising:
blow-molding a parison to form a container body with a base and a projection extending outwardly from the base of the container body;
after the forming of the container body in the blow-molding step, inverting the projection to extend inwardly from the base;
after the inverting step, transporting the container body with the projection inverted;
after the transporting step, repositioning the projection of the container body with an outwardly directed force;
after the repositioning step, filling the container body with a product;
sealing the filled container body to create a sealed and filled container; and
pushing the projection into the interior of the sealed and filled container body.

36. (withdrawn) The method of claim 35, wherein the container body has a smooth side surface.

37. (withdrawn) The method of claim 35, further comprising creating a vacuum in the sealed and filled container before the pushing.

38. (withdrawn) The method of claim 35, wherein the base comprises a single standing ring, the standing ring is substantially planar, the container body is supported by the standing ring resting on a substantially planar surface during the transporting step, and the container body is supported by the standing ring resting on a substantially planar surface after the pushing step.

39. (withdrawn) The method of claim 35, further including, before the pushing, passing each of said plurality of plastic containers through a cooling apparatus.

40. (withdrawn) A system for processing a plastic container, comprising:

means for blow-molding a parison to form a container body with a bottom and a projection extending outwardly from the bottom of the container body;

means for inverting the projection to extend inwardly from the container body bottom such that the projection is fully above a standing ring to achieve a geometrically stable position in which the standing ring can rest on a planar surface;

means for transporting the container body in its geometrically stable position;

means for filling the container after the transporting;

means for sealing the container after the transporting; and

means for pushing up at least part of the projection after the container is sealed by the means for sealing, to reduce volume inside the container.

41. (withdrawn) The system of claim 40, further comprising means for cooling the container body to create a vacuum in the container.

42. (withdrawn) The system of claim 40, further comprising means for cooling a hot product to create a vacuum in the container.

43. (withdrawn) The system of claim 40, further comprising means for creating a vacuum in the filled and sealed container.

44. (withdrawn) The system of claim 40, wherein said pushing reduces distortion caused by a vacuum created in the container, so that the resultant container body has sidewalls with a substantial portion that is relatively free of structural geometry.

45. (withdrawn) The system of claim 40, wherein the container body has sidewalls free of any vacuum panels.

46. (withdrawn) The system of claim 45, wherein the sidewalls are smooth.

47. (withdrawn) The system of claim 46, wherein the container simulates a glass container.

48. (withdrawn) The system of claim 40, wherein the container has sidewalls, the sidewalls consisting of a first portion and a second portion, the first portion being free of any vacuum panels, and the second portion consisting of a grip panel.

49. (withdrawn) The system of claim 48, wherein the grip panel includes a vacuum panel.

50. (withdrawn) The system of claim 49, wherein the grip panel includes a plurality of vacuum panels.

51. (withdrawn) The system of claim 40, wherein the means for pushing is configured to push at least part of the projection from an outwardly extending position to an inwardly extending position.

52. (withdrawn) The system of claim 40, wherein the means for pushing is for pushing at least part of the projection from below the standing ring to above the standing ring.

53. (withdrawn) The system of claim 40, wherein the means for pushing is adapted for pushing the entire projection.

54. (withdrawn) A system for processing a plastic container, comprising:
a blow molder configured to blow mold a parison to form a container body with a bottom and a projection extending outwardly from the bottom of the container body;
an inverter configured to invert the projection to extend inwardly from the container body bottom such that the projection is fully above a standing ring to achieve a geometrically stable position in which the standing ring can rest on a planar surface;

a transporter configured to transport the container body in its geometrically stable position;

a container filler configured to fill the container after the transporting;
a sealer configured to seal the container after the transporting; and
a pusher configured to push up at least part of the projection after the container is sealed by the sealer, to reduce volume inside the container.